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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/339,958	06/25/1999	ROBERT T. RASMUSSEN	2146-4	3281

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/339,958	RASMUSSEN, ROBERT T.	
	Examiner Kevin Quarterman	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 November 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,3-10,12-14 and 28-31 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,3-10,12-14 and 28-31 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 28 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. The term "high" in newly added claims 28 and 30 is a relative term which renders the claims indefinite. The term "high" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The claim limitation of the praseodymium-manganese oxide having a *high* molar ratio of praseodymium to manganese is rendered indefinite by the use of the term "high" in the claims.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-10, 12-14, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cathey (US 6255772) in view of Rasmussen (US 5762773).

6. Regarding independent claims 1 and 10, Figure 3 of Cathey shows a field-emission display device with a faceplate including a screen (306) having a phosphor coating (320). A baseplate assembly (202) includes an emission source (204) provided opposite the screen having electron-emission cathode tips (310) arranged in an array and a low potential extraction grid (304). A black matrix (322) is provided on the screen. In Column 9, Lines 14-17, Cathey disclose that the black matrix may be formed of any suitable material and should not be affected by electron bombardment, which would make the black matrix insulative. In regards to claim 3, Figure 3 of Cathey shows the emission source including an array of field emitter tip cathodes (310). In regards to claim 4, Figure 3 of Cathey shows the emission source including a low potential extraction grid (304) that is provided adjacent the field emitter tip cathodes. In regards to claim 5, Figure 3 of Cathey shows the array of field emitter tips being formed in a matrix addressable by row select control signals. In regards to claims 6 and 12, Cathey disclose that the extraction grid may be formed as a continuous layer or as parallel strips, and the field emitter tip matrix is also addressable by column select control signals (col. 2, ln. 40-55). In regards to claims 7 and 13, Figure 3 of Cathey shows the extraction structure including a plurality of column electrodes (204) addressable by column select signals. In regards to claims 8 and 14, Figure 3 of Cathey shows a matrix of anode electrodes (308). Cathey also disclose that a field-emission device has one or more voltage sources that maintain emitter tips at potential lower than the extraction grid. In regards to claim 9, Cathey disclose that the black matrix is provided for defining

the discrete pixel areas of the display, which would improve the image contrast (Column 3, Lines 15-18).

7. Cathey disclose the claimed invention except for the black matrix being formed of praseodymium-manganese oxide.

8. Figures 1-5 of Rasmussen teach that it is known in the art to provide field emission displays with a black matrix (16) on the screen being formed of material including praseodymium-manganese oxide (col. 5, ln. 33) for producing high-resolution displays.

9. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a black matrix of praseodymium-manganese oxide, as taught by Rasmussen, in the display device of Cathey for improving the image quality of the display.

10. Regarding newly added claims 29 and 31, Cathey and Rasmussen fail to exemplify the particles of the PrMnO_3 having an average size of $2\mu\text{m}$.

11. It would have been obvious to one having ordinary skill in the art to provide the particles of PrMnO_3 having an average size of $2\mu\text{m}$, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Response to Arguments

12. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (703) 308-6546. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kevin Quarterman
Examiner
Art Unit 2879

kq 
February 7, 2003

 
Vip Patel
Primary Examiner
Art Unit 2879